

Amendments to the Specification

Please replace the abstract with the following:

A reduced search space minimum distance decoding algorithm provides average probability of error performance close to that of optimal MAP decoding. The decoding algorithm provides dramatic complexity reductions compared with MAP decoding. A sub-optimal decoder receives signal vectors $y_1 \dots y_k$. Soft output bits are generated as is a reduced search space V via a reduced search space table creation unit in response to the soft output bits and an estimated channel H . A signal vector b is generated via a maximum likelihood decoding unit in response to the reduced search space V and the signal vectors $y_1 \dots y_k$.